

REMARKS

Summary of the Amendment

Upon entry of the above amendment, claims 31, 33 and 53 will have been amended. Accordingly, claims 13-54 will be pending with claims 13-32, 36-52 and 54 being withdrawn by the Examiner.

Summary of the Official Action

In the instant Office Action, the Examiner rejected claims 33-35 and 53 over the art of record. By the present amendment and remarks, Applicant submits that the rejection has been overcome, and respectfully requests reconsideration of the outstanding Office Action and allowance of the present application.

Interview of March 31, 2006

Applicant appreciates the courtesy extended by Examiner Johnson in the interview of March 31, 2006. In that interview, Applicant's representative discussed, among other things, that at least claims 33 and 53 are not disclosed or suggested by JONES. The Examiner disagreed.

The Examiner, however, agreed that JONES does not appear to disclose that, during the pressing, the parts do not rotate and that at least one of the ends of the parts is moved around a joint axis in a circulating manner. The Examiner emphasized, however, that this feature was not currently recited in any of the pending examined claims. The

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Examiner specifically explained that while it can be argued that this feature is recited in one or more withdrawn claims, examined claims 33-35 and 53 did not recite this feature and that the current rejection was therefore proper.

The Examiner, however, agreed to reconsider the rejection over JONES if claims 33 and 53 were amended to recite that, during the pressing, the parts do not rotate and that at least one of the ends of the parts is moved around a joint axis in a circulating manner.

Finally, in response to arguments made regarding the Restriction Requirement, the Examiner agreed to examine method claims 31 and 32 in the next Office Action.

Restriction Requirement

Claims 31-35 and 53 were elected with traverse with claims 31 and 32 being generic. However, the Examiner only examined claims 33-35 and 53 and withdrew all of the other pending claims. Moreover, the Examiner has not made the restriction final. Applicant requests that claims 31 and 32 be examined. Furthermore, at this time, Applicant is not canceling the non-elected claims pending allowance of the elected claims.

Traversal of Rejection Under 35 U.S.C. § 102

Applicant traverses the rejection of claims 33-35 and 53 under 35 U.S.C. § 102(b) as anticipated by US Patent No. 3,184,841 to JONES et al.

The Examiner asserted that this document discloses all the features recited in these claims. Applicant respectfully traverses this rejection.

Notwithstanding the Office Action assertions as to what this document discloses or

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suggests, Applicant submits that no proper reading of JONES discloses or suggests: inter alia, a method for joining parts having great longitudinal extension by friction welding using a device for joining faces of parts having great longitudinal extension by friction welding, the device comprising first and second clamping arrangements structured and arranged to position ends of the parts against one another, at least one of the first and second clamping arrangements being axially movable with respect to another of the first and second clamping arrangements, and at least one of the first and second clamping arrangements being movable along a direction that is parallel to a part cross-sectional plane defined by an end face of one of the parts, the method comprising arranging ends of the parts opposite one another, wherein the ends are provided with flat axially normal cross-sectional surfaces, pressing the cross-sectional surfaces against one another and moving an axis of at least one of the parts relative to an axis of another of the parts, such that face areas of the ends are brought to one of an increased temperature or a joining temperature, axially aligning the parts, and metallically bonding the parts, *wherein, during the pressing, the parts do not rotate and at least one of the ends of the parts is moved around a joint axis in a circulating manner*, as recited in independent claim 31; inter alia, a method for joining parts having great longitudinal extension by friction welding, the method comprising arranging ends of the parts opposite one another, wherein the ends are provided with flat axially normal cross-sectional surfaces, pressing the cross-sectional surfaces against one another by moving at least one of the ends axially relative to another of the ends, such that face areas of the ends are brought to one of an increased temperature or a joining temperature, axially aligning the parts, and metallically bonding the

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parts, *wherein, during the pressing, the parts do not rotate and at least one of the ends of the parts is moved around a joint axis in a circulating manner*, as recited in independent claim 33, and inter alia, a method for joining two parts by friction welding using a device for friction welding parts, the device comprising first and second clamping arrangements structured and arranged to position ends of the parts against one another, at least one of the first and second clamping arrangements being axially movable with respect to another of the first and second clamping arrangements, first and second moving devices for respectively moving the first and second clamping arrangements along a direction that is parallel to a part cross-sectional plane, and first and second control devices for controlling movement of the first and second moving devices, wherein the part cross-sectional plane is defined by an end face of one of the parts, the method comprising arranging ends of the two parts opposite one another, pressing the ends against one another by moving at least one of the ends axially relative to another of the ends, moving the ends relative to each other along a direction which is parallel to an end surface of at least one of the ends, axially aligning the parts, and metallicity bonding the ends of the two parts, *wherein, during the pressing, the parts do not rotate and at least one of the ends of the parts is moved around a joint axis in a circulating manner*, as recited in independent claim 53.

Applicant acknowledges that Figs. 12-15 of JONES apparently discloses an arrangement which can friction weld parts 98 and 96 using high frequency torsional vibrations (see col. 10, lines 29-36 and col. 12, lines 47-60). However, as explained in the Interview, the disclosed arrangements in JONES does not friction weld the parts such that

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during the pressing, the parts do not rotate. Nor does JONES provide that at least one of the ends of the parts is moved around a joint axis in a circulating manner. To the contrary, JONES necessarily produces a rotation of the parts because it specifically utilizes torsional vibration. Indeed, this is clearly disclosed on col. 12, lines 43-60 of JONES. Furthermore, the movement of the parts during friction welding is always about a common axis of the parts. This is clearly described on col. 13, lines 2-6 which explains that the torsional vibration welding produces "a ring-shaped weld". The invention, on the other hand, provides that the parts do not rotate and that at least one of the ends of the parts is moved around a joint axis in a circulating manner. That is, whereas the invention provides that one of the ends orbits about the joint axis, JONES merely discloses rotational movement of both parts relative to the joint axis.

Thus, Applicant submits that the above-noted claims are not disclosed, or even suggested, by any proper reading of JONES.

Because the applied document fails to disclose or suggest at least the above-noted features of the instant invention, Applicant submits that any proper reading of this document fails to render anticipated, or even unpatentable, the combination of features recited in at least independent claims 31, 33 and 53.

Moreover, Applicant submits that dependent claims 32, 34 and 35 are allowable at least for the reason that these claims depend from allowable base claims and because these claims recite additional features that further define the present invention. In particular, Applicant submits that no proper reading of JONES discloses or suggests, in combination: that the method further comprises, after the axially aligning, forcing the ends

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of the parts together as recited in claim 32; that the method further comprises, after the axially aligning, forcing the ends of the parts together to produce an all-over metallic bonding of the ends of the parts as recited in claim 34; and that the pressing produces a weld area and takes place under increased pressure as recited in claim 35.

Applicant requests that the Examiner reconsider and withdraw the rejection of the above-noted claims under 35 U.S.C. § 102(b).

CONCLUSION

In view of the foregoing, it is submitted that none of the references of record, either taken alone or in any proper combination thereof, anticipate or render obvious the Applicant's invention, as recited in each of the pending claims. The applied references of record have been discussed and distinguished, while significant claimed features of the present invention have been pointed out.

Further, any amendments to the claims which have been made in this response and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

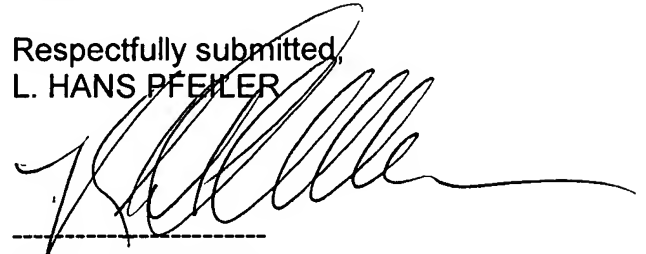
Accordingly, reconsideration of the outstanding Office Action and allowance of the present application and all the claims therein are respectfully requested and now believed to be appropriate.

The Commissioner is hereby authorized to refund excess payments and charge any additional fee necessary to have this paper entered to Deposit Account No. 19-0089.

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Should the Examiner have any further comments or questions, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,
L. HANS PFEILER

A handwritten signature in black ink, appearing to read 'Neil F. Greenblum', written over a horizontal dashed line.

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